DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
WASHINGTON, D.C. 20360

IN REPLY REFER TO

NAVAIRINST 4860.1A
AIR-5018
3 Jan 1972

NAVAIR INSTRUCTION 4860.1A

From: Commander, Naval Air Systems Command

Subj: Provision of industrial facilities to contractors, replacement of equipment in-use and retention and use of existing facilities; establishment of policies and procedures

Ref: (a) NAVMATINST 4860.13 of 5 Dec 1969
(b) NAVMATINST 4860.11 of 14 Feb 1967
(c) Armed Services Procurement Regulation
(d) NAVAIRINST 4862.1 of 12 Mar 1968

Encl: (1) Instructions for Preparation of Machine Tool Replacement Analysis Work Sheet
(2) Instructions for Preparation of Proposal Requesting Government Furnished Industrial Facilities

1. Purpose. This instruction establishes policies, procedures and limitations for submission and approval of industrial facilities projects for expansion, replacement, modernization, retention and use of existing facilities by contractors in support of NAVAIR (Naval Air Systems Command Headquarters) production, maintenance, research and development programs, and for the repair and maintenance of such facilities, in keeping with the guidelines of references (a) and (b).

2. Cancellation. This instruction cancels NAVAIR Instruction 4860.1 of 20 March 1969.

3. Definitions. For the purpose of this instruction, the following definitions apply:

a. Industrial Facility Project. A planned undertaking of work for the provision of industrial facilities at either Government-owned or privately-owned plants to meet a particular known requirement. Such projects shall cover the expansion of Government and/or private plants, including land necessary therefor, and procurement of plant equipment, machine tools, and other production equipment (including facilities furnished from reserves) and installation thereof in said plants. The term shall be construed to include major alterations and initial rehabilitation or modernization of Government or privately-owned industrial facilities which increase capacity. Maintenance or repair of Government industrial facilities is not included.

b. Expansion. The addition of facilities which either creates a new industrial plant or augments the capacity of an existing one. This capacity can be in research and development, maintenance or production activities.

c. Facilities. Industrial property (other than material, special tooling, military property, and special test equipment) for production, maintenance, research, development or test including real property and rights therein, buildings, structures, improvements and plant equipment.

d. Nonseverable Property. That property which cannot be removed after erection or installation without substantial loss of value or damage thereto, or to the premises where installed.

e. Replacement. This refers to the replacement of one or more existing items of industrial equipment by another item or items in order to achieve economic advantage to the Department of Defense through increased efficiency. Items can be replaced either by new procurement or equipment from idle inventories as long as the replacement action is supported by an analysis of cost savings (see enclosure (1)).

f. Modernization. This means major alterations to existing government-owned buildings, real property improvements and production equipment which expands operating/production capacity through application of the latest state-of-the-art developments as a general plan of betterment.

g. Maintenance

(1) Normal Maintenance: the recurrent day-to-day, periodic or scheduled work required to preserve or restore industrial facilities to such condition that they may be effectively utilized for its designated purpose. It includes work undertaken to prevent damage to facilities which otherwise should be more costly to restore.

(2) Capital Maintenance: the restoration of industrial facilities to such condition that they may be utilized for their designated purposes by overhaul, reprocessing or replacement of constituent parts or materials which have deteriorated by action of the elements or wear and tear and which cannot be corrected through normal maintenance as defined above. (This is sometimes referred to as repair).

4. Policy - Providing Facilities. It is the policy of NAVAIR that maximum reliance will be placed on the use of privately-owned facilities in connection with the performance of NAVAIR contracts. Facilities, as defined in Section XIII of reference (c), will not be provided to contractors for expansion or replacement unless the criteria set forth in paragraph 5 below are met. Competitive solicitations shall not include an offer by the government to provide new facilities, although such solicitations may include an offer to furnish existing government-owned facilities, if the

determinations specified in subparagraph 5a or 5b below are made. Facilities will not be provided to contractors unless the Commander, Naval Air Systems Command or his designee has determined in accordance with this instruction that the facilities are necessary.

5. Exceptions. In unusual circumstances exceptions may be made for facilities expansion, replacement or modernization or for approving continued retention of existing facilities when the following criteria are met:

a. For mobilization production of items being procured in accordance with an approved mobilization plan;

b. The Defense contract cannot be fulfilled by any other practical means, or if it is in the public interest;

c. The contractor, represented by an executive corporate official, expresses in writing his unwillingness or financial inability to acquire the necessary facilities with his resources;

d. The contractor explains in writing that time will not permit him to obtain timely deliveries of such facilities to meet defense requirements even though he is willing and financially able to acquire the facilities; (In such instances, existing government-owned facilities, not new purchases, may be provided until the contractor purchased facilities are delivered and installed);

e. That for facilities replacement, auditable savings and/or improved delivery rates can be clearly identified in support of NAVAIR military products being produced or proposed by the contractor as a result of facilities assistance. Savings from replacement programs will be reported and audited following procedures defined in reference (c);

f. Contractors cannot provide the required services through the use of subcontractors;

g. Leasing of industrial facilities by contractor can be proven to be impractical; and

h. The cost of the individual items requested exceeds $1,000.

Facility projects to be considered as an exception to policy stated herein as a minimum must meet the following combination of criteria set forth above: (a) or (b) and (c) or (d), plus (e) through (h) inclusive.

6. Procedures. Contractor requests or proposals for government furnished facilities will be submitted to NAVAIR with the detailed justification and analysis required by enclosure (1) or (2), as applicable, and certified

under the "exception criteria" as outlined in paragraph 5 above. All proposals must be forwarded through the cognizant Field Administration Office (Defense Contract Administration Services, Naval Plant Representative, etc.) for a detailed analysis, justification and appropriate endorsement prior to any action within NAVAIR. In the event government facilities are approved and provided to contractors such facilities will normally be accountable under a facilities contract as outlined in Section VII of reference (c).

7. Approval Authority

a. References (a) and (c) establish echelons of approval authority for facility projects and capital maintenance work and for furnishing equipment from Department of Defense Industrial Reserves involving expenditure of funds at one activity or plant site in a fiscal year. Reference (a) also delegates to the SYSCOM Commanders authority for approval of

(1) facility projects for expansion, replacement or modernization when the estimated expenditure of funds is less than $500,000;

(2) facility projects providing existing equipment from Department of Defense Industrial Equipment Reserves for expansion or replacement when the acquisition cost of such facilities is less than $500,000; and

(3) projects for capital maintenance of government-owned facilities when the estimated expenditure of funds is less than $1,000,000.

b. The Commander, Naval Air Systems Command further delegates approval authority for the foregoing projects to:

(1) Assistant Commander for Material Acquisition (AIR-05). In the absence of, or when so directed by AIR-05, this authority extends to AIR-05A, or in his absence to AIR-05B.

(2) Director, Acquisition Control and Resources Division (AIR-501), through AIR-05, for facilities projects as described in subparagraph 7a(2) and projects for capital maintenance of government-owned facilities when the estimated expenditure of funds is less than $500,000. In the absence of, or when so directed by AIR-501, this authority extends to AIR-501A.

8. Action. The Acquisition Control and Resources Division shall

a. Coordinate Facilities Action. Assure that proper condition exists between the procurement and facility organizations so that information pertaining to potential industrial facilities requirements is made known during the early stages of procurement planning actions.

b. Expansion or Replacement Proposals. Review all proposals requesting government facilities support and, if such proposals qualify for consideration within the exceptions set forth in paragraph 5 of this instruction, initiate the following actions:

(1) Screen Department of Defense Industrial Reserves as required by reference (c).

(2) Obtain the Facilities Project Approval from the appropriate authority as identified in paragraph 7 of this instruction. Facilities Project Approval Requests shall be coordinated with the cognizant PMA and AIR-00C. As required by reference (a), NAVFAC (Naval Facilities Engineering Command) review and comments on facilities projects involving civil works costing more than $25,000 shall be obtained prior to submittal of the Facilities Project Approval Request.

(3) Prepare and submit the Procurement Request for negotiation and execution of a facilities acquisition contract to the Contracts Group (AIR-02). A copy of the Facilities Project Approval shall be provided to AIR-02 prior to execution of the Facilities Acquisition Contract.

(4) Advise the NAVAIR Contracting Officer cognizant of the appropriate weapon systems of the extent of approved government facilities support. In facilities projects for replacement of in-use equipment, the amount of resultant savings will be made known to the Contracting Officer(s) for pricing action on the related hardware procurement contracts.

(5) Monitor progress of work authorized under the Facilities Acquisition Contract to assure satisfactory completion of the work within established time and cost estimates.

c. Retention and Use of Existing Facilities

(1) Exercise a continual review over government-owned industrial facilities in Contractor plants. This review will coincide with major program changes and resultant requirements for continued facilities use. As a minimum, this review will be initiated 6 months prior to the termination date of each facilities use contract and will ensure that such facilities are being utilized to the maximum extent possible on current NAVAIR or Department of Defense programs and/or are essential to support future production required by approved industrial mobilization schedules.

(2) Based on the foregoing review, prepare and submit the Procurement Request for negotiation and execution of a superseding Facilities Management Contract or advise the contractor that the facilities are to be reported for disposal.

(3) In the event that disposal is directed, to follow-up disposal action obtain a Contract Completion Statement and provide to the Contracts Group (AIR-201) for contract close-out action.

d. Capital Maintenance Proposals Review. Review all proposals, justify the need for accomplishment of the work and initiate the following actions:

(1) Obtain NAVFAC review and comments as discussed in subparagraph 8b(2) above.

(2) Prepare and submit the Procurement Request for negotiation and execution of a Capital Maintenance Contract to the Contracts Group (AIR-02).

(3) Monitor progress of work authorized under the Capital Maintenance contract to assure satisfactory completion of the work within established time and cost estimates.

e. Budget. Annual funding requirements supporting facilities projects shall be programmed as separate line item entries in the PAMN (Aircraft), PAMN (Missile) and OPN NAVAIR budgets. Long range requirements will be set forth in the FYDP (Five Year Defense Program). Funding requirements shall be developed as follows:

(1) Expansion funding requirements shall be developed through analysis of the capability of the industrial base to respond to weapons systems procurement plans defined in the FYDP and emergency requirement under approved mobilization production plans.

(2) Replacement of plant equipment will be programmed at an annual level of five percent of the value of the in-use inventory as directed by enclosure (1) to reference (b). This criterion is for over-all NAVAIR plant equipment planning and is not intended to restrict individual plant programming. Capital Maintenance of plant equipment shall be performed within the replacement budget constraints.

(3) Capital Maintenance funding requirements for real property and improvements shall be developed in accordance with procedures set forth in reference (d).

9. Report and Forms

a. Report Symbols

(1) Report symbol EXOS 4870-2 applies to the reporting requirements on DD Form 1106 (Machine Tool Replacement Analysis Work Sheet). This report

has been approved by Office of Management and Budget No. 22-R179.

(2) Report symbol NAVAIR 4860-1 applies to the Proposal Requesting Government Furnished Industrial Facilities. Pending approval for change in the reporting format Office of Management and Budget No. 45-R194-3 shall be cited.

b. Availability of Forms

Supplies of DD Form 1106 may be obtained from the Forms and Publications segment of the Navy Supply System in accordance with NAVSUP Publication 2002. Offices of the Navy Plant Representative and Defense Contract Administration Services are responsible for securing supplies for contractors under their cognizance.

D. K. WEITZENFELD
Vice Commander

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INSTRUCTIONS FOR PREPARATION
OF
MACHINE TOOL REPLACEMENT ANALYSIS WORK SHEET (DD Form 1106)
(Report Symbol EXOS 4870-2, Bureau of the Budget Approval No. 22-R179)

PREPARATION - Prepare DD Form 1106 as prescribed in Appendixes 1 through 4, attached, by typewriter in the number of copies required. Explanation of terms used in DD Form 1106 and detailed instruction for its preparation follow:

ANALYSIS NO. - A number will be assigned to each "Machine Tool Replacement Analysis Work Sheet" and "Related Production Equipment Analysis Work Sheet" and the analysis sheet will be numbered consecutively for each contractor-operated facility. Each military department will develop a prefix that will be assigned each location.

DATE - Record the month, day and year the analysis work sheet is completed.

1. ACTIVITY - The name of contractor facility where "present equipment" is being used.

2. LOCATION - The street, city and state where "present equipment" is being used.

3. SHOP - The shop number, cost center or organizational segment, as applicable, where "present equipment" is being used.

4. BUILDING NO. - The building number (if applicable) where "present equipment" is located.

5. PRESENT EQUIPMENT - (Note: If a group of machine tools or related production equipment items is involved, generally describe and refer to supporting work sheets.)

a. DESCRIPTION - Copy the noun description given in the "Directory of Metalworking Machinery" 1960 Revision, or DSA Industrial Plant Equipment Handbooks as listed in section 13-312 of reference (d).

b. MANUFACTURER - The name of the original builder of the "present equipment."

c. MODEL NO. - The original manufacturers' model designation if one has been assigned. If equipment is special designate "SPEC." If single purpose designate "SGL."

d. PRODUCTION EQUIPMENT CODE - For Machine Tools, the twelve digit numerical code assigned in "Directory of Metalworking Machinery," 1960 Revision or DSA Industrial Plant Equipment Handbooks as listed in section 13-312 of reference (d).

e. DEPARTMENTAL IDENTIFICATION NO. - Government Identification number.

f. YEAR BUILT - The year present equipment was originally built. If the equipment has been rebuilt, so indicate in the supporting justification.

g. TOTAL ACQUISITION COST - Acquisition cost of present equipment as shown on the DD Form 1342.

h. QUANTITY - The number of "present equipment" items involved in the analysis.

6. PROPOSED EQUIPMENT

a. DESCRIPTION - Copy the noun description given in "Directory of Metalworking Machinery," 1960 revision or DSA Industrial Plant Equipment Handbooks as listed in section 13-312 of reference (d). If these references do not contain the noun description of the proposed equipment, provide a brief, accurate description. A further detailed description (such as size, capacity, electrical characteristics, temperature range, etc.) of the machine tool or item of related production equipment to be supplied may be entered on the back of all DD Forms 1106 or in the supporting calculations to facilitate more accurate screening of reserves.

b. MANUFACTURER - The name of the builder of the "proposed equipment."

c. MODEL No. - The model number assigned by manufacturer of "proposed equipment," if available. If the equipment is special designate "SPEC." If single purpose, designate "SGL."

d. PRODUCTION EQUIPMENT CODE - For Machine Tools, the twelve digit numerical code assigned in "Directory of Metalworking Machinery," 1960 Revision or DSA Industrial Plant Equipment Handbooks as listed in section 13-312 of reference (d).

e. QUANTITY - The number of "proposed equipment" items involved in the analysis.

f. PRODUCTIVITY INCREASE RATIO - The increased productive capacity ratio which will reflect the comparison of the rate of production of the "proposed equipment" to that of the "present equipment." This figure should be developed through engineering studies.

7. OPERATING COST ANALYSIS FOR EQUIVALENT OUTPUT (next year) - (The following factors shall be considered and answers applied to columns a and b where applicable.)

a. MACHINE LOAD (Hours Next Year) - The number of hours, based on the known and anticipated work load, that the "present equipment" will be used during the next twelve months following the date of installation of the proposed item for certain production output (Column a). The number of hours the "proposed equipment" would be used during the same twelve months for equivalent production output (Column b). These hours will be in direct proportion to the productivity increase ratio (6f) of the"proposed equipment" to the "present equipment," i.e., if the "present equipment" will be used for 1800 hours for certain production output the next twelve months and the productivity increase ratio (6f) is 3:1, then the machine load for the "proposed equipment" will be 1800 ÷ 3 = 600 hours.

b. DIRECT LABOR - The wages of the operator (Including helper, if applicable) required for the number of hours shown in 7a.

c. INDIRECT LABOR - The costs applicable to overhead expenses, which include but need not be limited to administration, supervision, inspection, janitorial services, safety and training, shift premiums, bonuses, etc. This is usually a set ratio or percentage of direct labor charges.

d. FRINGE BENEFITS - The costs which include, but need not be limited to, annual, sick, holiday and military leave, allowance for protective clothing, etc. This is usually expressed as a percentage of direct labor.

e. MAINTENANCE - The estimated costs of ordinary operational maintenance and repair for the next twelve month period. It does not include cost for major overhaul or rebuilding. When major overhaul or rebuilding of present equipment is contemplated this will be the subject of a complete analysis comparing the present equipment "as is" against rebuilding it, and further comparing the results of this analysis with an analysis of the present equipment against procuring new equipment.

f. POWER - The cost of power or fuel consumed. This may be obtained by multiplying the factor of costs per kilowatt-hour or cost of fuel consumed by the number of hours in (7a) multiplied by the kilowatts or the unit cost of power or fuel of the applicable equipment.

g. SCRAP/REWORK - The costs of material and labor (including direct, indirect and fringe benefits) for parts scrapped or in need of rework when the cause of the spoilage is due to the fault of the machine tool or related production equipment. Do not include these costs of spoilage if due to the fault of the operator unless the proposed equipment will eliminate such spoilage.

h. TOOLING - If there are any significant differences between the present and proposed equipment in the costs for additional jigs and fixtures, cutting tools, attachments and other accessories which are not considered a part of the basic equipment, these differences should be taken into consideration. Do not include attachments and fixtures which are considered a permanent part of the equipment and are included in capital costs. Consumable items such as cutting tools, abrasive wheels, etc. which are normally required on both present and proposed equipment, shall not be considered unless the difference in quantities or value is significant.

i. SAVINGS/OTHER OPERATIONS, ASSEMBLY - The dollar savings resulting from elimination or reduction of subsequent operations, reduction in inspection time, less assembly time, etc. For example, if due to better accuracy of the proposed equipment, less time is spent in the assembly of parts, these savings should be reflected as a cost against the present equipment.

j. OTHER COSTS - Any other costs or savings which would contribute to the completeness of the analysis. For examples, savings in floor space, operator training and part programming for numerically-controlled equipment should be reflected if these are critical items.

k. TOTAL OPERATING COSTS - The sum of figures entered in 7b through 7j.

l. NET OPERATING COSTS FAVORING PROPOSED EQUIPMENT - The result of subtracting the total in line 7(k)b from 7(k)a. This is the annual savings in manufacturing cost and is used to determine the period.

8. CAPITAL COST ANALYSIS OF PROPOSED EQUIPMENT (next year)

a. ACQUISITION COST - The acquisition cost of the proposed equipment including all attachments, accessories and related items required for recovery of the Total Installed Cost (8.c).

b. INSTALLATION, TRANSPORTATION AND MISCELLANEOUS COSTS - the cost for transportation, installation and any miscellaneous cost of preparing the proposed equipment for operation. A breakdown of these costs shall be included in the supporting calculations.

c. TOTAL INSTALLED COST - The result of adding 8a and 8b.

Items 8.d through 8.i need not be completed.

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MACHINE TOOL REPLACEMENT ANALYSIS WORK SHEET	ANALYSIS NUMBER 99999-1 DATE February 1, 1969	Form Approved Budget Bureau No. 22-R179

1. ACTIVITY	2. LOCATION	3. SHOP	4. BUILDING NO.
SMITH AIRCRAFT CORP.	FLYBY ROAD SOUTH CITY, NEW MEXICO	532	2 L

5. PRESENT EQUIPMENT				6. PROPOSED EQUIPMENT	
a. DESCRIPTION: SEE ATTACHED SHEETS				a. DESCRIPTION: PROFILE-CONTOUR BRIDGE TYPE MILLING MACHINE, 3 AXIS, N/C 2 SPINDLE, 40 HP, VAR SPEED HDS	
b. MANUFACTURER: SEE ATTACHED SHEET	c. MODEL NO.			b. MANUFACTURER: ONSURD MACHINE CO.	c. MODEL NO. 12ØX168
d. PRODUCTION EQUIPMENT CODE: SEE ATTACHED SHEET				d. PRODUCTION EQUIPMENT CODE: 3417-63ØØ - 0201	
e. DEPARTMENTAL IDENTIFICATION NO.	f. YR BUILT: 52-54	g. TOTAL ACQUISITION COST: 188,516	h. QUANTITY: 6	a. QUANTITY: 2	f. PRODUCTIVITY INCREASE RATIO: 3:1

7. OPERATING COST ANALYSIS FOR EQUIVALENT OUTPUT (Next Year)

FACTOR	a. PRESENT EQUIPMENT	b. PROPOSED EQUIPMENT
a. MACHINE LOAD (Hours next year)	33ØØØ	11ØØØ
b. DIRECT LABOR	$ 115,5ØØ	$ 38,5ØØ
c. INDIRECT LABOR	$ 132,825	$ 44,275
d. FRINGE BENEFITS (included in "c" above)	$ -	$ -
e. MAINTENANCE	$ 1,5ØØ	$ 5ØØ
f. POWER	$ 49,236	$ 3,282
g. SCRAP/REWORK	$ 6,ØØØ	$ -
h. TOOLING	$ 3Ø,ØØØ	$ 1,ØØØ
i. SAVINGS/OTHER OPERATIONS, ASSEMBLY	$ 15,ØØØ	$ -
j. OTHER COSTS	$ -	$ -
k. TOTAL OPERATING COSTS	$ 35Ø,Ø61	$ 87,557

l. NET OPERATING COSTS FAVORING PROPOSED EQUIPMENT (k, col a, minus k, col b) $ 262,5Ø4

8. CAPITAL COST ANALYSIS OF PROPOSED EQUIPMENT (Next Year)

a. ACQUISITION COST	$ 85Ø,ØØØ
b. INSTALLATION, TRANSPORTATION AND MISCELLANEOUS COSTS	$ 65,ØØØ
c. TOTAL INSTALLED COSTS (8a plus 8b)	$ 915,ØØØ
d. PRESENT DISPOSAL VALUE OF PRESENT EQUIPMENT	$
e. NET REQUIRED INVESTMENT (8c minus 8d)	$
f. SERVICE LIFE	Years
g. CHART PERCENT	%
h. TOTAL CAPITAL COST (8e X 8g)	$
9. NEXT YEARS SAVINGS FROM REPLACEMENT (7l minus 8h)	$

DD FORM 1 AUG 57 1106

Enclosure (1)

ATTACHMENT FOR DD 1106 FORM

ANALYSIS NO. 99999-1

(a) MACHINE	(b) MANUFACTURER	(c) MODEL NUMBER	(d) PEC	(e) I. D. NO.	(f) YEAR	(g) COST
Milling Machine, Profiling, Vert. Single Spindle, Bridge Type, 2-Dim. Tracer	Morey Machine Company	50 SM	3417 6314 1202	90845/854324	1954	$ 93,485
Milling Machine Knee Type, Vertical #3	Cincinnati Milling	3HSDT	3417 2330 3417	90845/854069	1953	$ 18,025
Milling Machine Knee Type, Horizontal #2	Kent Owens	2-20	3417 4130 3205	90845/853578	1952	$ 4,116
Milling Machine, Vertical Dual Power, Dial Type, 50" TT	Cincinnati Milling	5DTDP	3417 2350 5002	90845/854000	1953	$ 31,185
Milling Machine Vertical Knee Type, 42" TT	Cincinnati Milling	4 HPDT	3417 2340 4201	90845/853998	1952	$ 23,680
Milling Machine Vertical, 34" TT	Cincinnati Milling	3 HSDT	3417 2330 3417	90845/854070	1953	$ 18,025
						$188,516

18220

Appendix 1
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Enclosure (1)

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REMARKS:

7a Machine load - Machine loading for the present equipment is based upon three (3) shifts per day (22 hours), five (5) days per week, fifty (50) weeks per year.

Based on this utilization factor, the existing machines (6) will operate for a total of 33,000 hours per year.

Equivalent output on the proposed machines is estimated at 11,000 hours (3:1 productivity increase ratio).

7b Present equipment

33,000 hrs/yr X $3.50/hr = $115,500

Proposed equipment

11,000 hrs/yr X $3.50/hr = $ 38,500

7c Indirect labor

Present equipment

33,000 hrs/yr X $3.50/hr X 115% = $132,825

Proposed equipment

11,000 hrs/yr X $3.50/hr X 115% = $ 44,275

7e Maintenance

Present equipment

Based on an analysis of maintenance and shop records, it has been estimated that next year's maintenance costs will amount to $1,500. This figure breaks down as follows:

Maintenance labor - $6.00/hr X 225 hrs =	$1,350
Replacement parts required =	150
Total	$1,500

Proposed equipment

Based on the contractor's experience in operating similar machines, as well as other numerically controlled machine tools, it has been estimated that next year's maintenance costs will amount to $500. This figure breaks down as follows:

Preventive maintenance 0.6% of total operating hours

11,000 hrs/yr X 0.6% X $6.00/hr maintenance labor = $396

Replacement parts required 104
Total $500

7f Power

Present equipment

The power to operate the present equipment is electrical. Electrical energy costs have been calculated on a yearly basis using the formula:

Total horsepower X total number of hours operated during year X .746 kilowatt/horsepower X $0.01 cost/kilowatt = cost

Therefore, using this formula, the power operating cost for the present equipment is:
200 H. P. X 33,000 hrs/yr X .746 KW/H.P. X $0.01/KW-hr = $49,236

Proposed equipment

The computation for the proposed equipment is as follows:

40 H. P. X 11,000 hrs/yr X .746 KW/H. P. X $0.01/KW-hr = $3,282

7g Scrap/Rework

Present equipment

A quality survey has shown that approximately 2.75% of the total number of hours that the present equipment operates are lost because of scrappage and replacement or rework of parts with dimensional discrepancies. The cost for scrap/rework items is computed:
33,000 hrs/yr X 2.75% - 907.5 hrs X $6.00/hr
labor cost = $5,445

The material ratio to labor/hr equals $0.61 per hr.

Therefore 907.5 hrs X $0.61
material cost = $555

Adding labor and material cost
Total cost Scrap/Rework $6,000

Proposed equipment

Due to the advancement in numerically controlled equipment, the con-

tractor feels that the rate of scrap/rework for the proposed machine tools will be negligible.

7h Tooling

Present equipment

An analysis of the cost to tool the present equipment requiring jigs and fixtures for the six (6) machines offered for replacement amounts to $30,000.

Proposed equipment

From the contractor's experience along with the tool builder's recommendations the proposed equipment will not require any special tooling with the exception of built in adjustment for pre-setting standard tooling. Cost of this capability should be $1,000.

7i Savings/other Operations, Assembly

Present equipment

To complete an end product, secondary operations costing $15,000.00 are required.

Proposed equipment

All operations to complete the same end product noted above could be completed at one setting, utilizing the proposed equipment. Additional operations such as deburring, polishing and inspection would be eliminated.

INSTRUCTIONS FOR PREPARATION OF PROPOSAL REQUESTING
GOVERNMENT FURNISHED INDUSTRIAL FACILITIES
(Report Symbol NAVAIR 4860-1, Bureau of the Budget Approval No. 45 R194.3)

1. Contractor submitting requests for initial or additional (new or reserve) Government-Furnished Industrial Facilities shall include in their proposal the following information as a minimum:

a. Name of contractor and location

b. Purpose

c. Basis of need

d. Estimated cost

e. Percentage of subcontracting planned

f. A five year summary of contractor's financial progress

g. Reasons why contractor cannot or will not finance this request

h. Quantity and cost of items to be produced

i. Government Services involved

j. State whether proposal constitutes a complete facility

k. State whether additional floor space will be required

l. Effect on labor requirements

m. Information concerning quantity and nature of existing facilities in contractor's plant(s).

n. Quote facilities clause in procurement contract - give contract number.

2. List the Estimated Cost and Indication of Method of Computation for each category showing a total for each of the following categories:

a. Land, etc.

b. Buildings, etc.

c. Machinery, Equipment, etc.

d. Portable tools, material handling, and automotive equipment

e. Machinery and equipment installation costs

f. Indirect costs and methods for calculating same

g. Architect and engineering costs

3. Total Cost

4. Review of Proposals for Facilities Expansion

The cognizant Field Contract Administration Office shall review each item independently and jointly with responsible contractor personnel to insure:

a. That each item is accurately protrayed, reasonable and necessary to long range as well as current requirements.

b. That each item is thoroughly justified.

c. That approval is in the best interest of the Government and is vital and necessary to effective and efficient contractual accomplishment.

d. That duplication of available facilities does not exist.

e. That no other source of work accomplishment is available or economically feasible. This includes subcontract sources.

f. That the effect on the program is described in the event items are not approved.

g. That the contractor's cost estimates are reasonably accurate and based on current market prices.